Heartland Community College
Technology Division
Course Syllabus for Students

Course prefix and number: CSCI 153
Course title: Android Development

CREDIT HOURS: 4
CONTACT HOURS: 5
LECTURE HOURS: 3 LABORATORY HOURS: 2

CATALOG DESCRIPTION (Include specific prerequisites):

Prerequisite: CSCI 130 with a grade of C or better or equivalent with Java, or CSCI 224 with a grade of C or better. This course introduces the Android mobile operating system. The topics covered include: mobile application guidelines in general, the Android SDK, and advanced Java concepts unique to the Android operating system. Programming assignments will provide practical experience in developing applications for Android.

Instructor Information:

Nicolaas (Johnny) tenBroek

e-mail: nicolaas.tenBroek@heartland.edu
web: http://www.technology.heartland.edu/faculty/johnnyt
Office Phone: 309.268.8858
Cell Phone: 815.314.0764 (You may text me at this number)
Office: WDC 1206
15:30 to 17:00 Monday and Wednesday
15:30 to 16:30 Tuesday and Thursday
Other hours by appointment

NOTE: Please be sure to send all e-mail to the address listed above. Due to the amount of spam flowing into the college, you must use your MyHeartland account when e-mailing me. Messages from your personal account may well end up in the trash or junk folders without being opened.

Please feel free to ask for help outside of my scheduled lab and office hours as I will be more than happy to help. If you wish, you may schedule special meeting appointments with me.
TEXTBOOK:
None. The online documentation found at http://developer.android.com/ will be used extensively throughout the course.

RELATIONSHIP TO ACADEMIC DEVELOPMENT PROGRAMS AND TRANSFERABILITY:
CSCI 153 was designed to meet the specific needs of an Associate of Applied Science degree. Please see an academic advisor for an explanation concerning transfer options.

COURSE OBJECTIVES (Learning Outcomes)

At the completion of this course, the student should be able to:

- Apply classical problem solving strategies to solve various kinds of mobile device programming problems.
- Apply the object-oriented principles of encapsulation, composition, abstraction, polymorphism, and inheritance to analyze problems and design solutions.
- Employ Java and the Android SDK to write applications for the Android platform.
- Explain the resource limits of mobile environments and how to ensure applications can use those resources effectively.
- Explain appropriate User Interface guidelines for mobile devices.
- Deploy applications to a mobile device.

Course Outline:

1. The Android SDK
2. The Java components of Android
3. Guidelines for writing mobile applications
4. Graphics
5. Audio
6. Video
7. Handling Data
8. Internet connectivity
9. Using sensors
METHOD OF EVALUATION (Tests/Exams, Grading System):

Students will be evaluated by examinations and assignments.

<table>
<thead>
<tr>
<th></th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>75</td>
</tr>
<tr>
<td>Final Project</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

LABS: There will be many labs assigned over the course of the semester. Every concept and assignment is tied to one or more labs. The labs allow students an opportunity to learn the concepts in a safe setting where interaction with other students and the instructor is encouraged. The instructor will not answer any question regarding an assignment until it is clear that the student has completed the corresponding labs and spent ample time working through the assignment prior to asking the question.

Assignments: Assignments are individual work and are due on the date determined in class. Assignments will only be accepted late if there is an acceptable reason. Late assignments will only be accepted up to one week after the due date, and if accepted they will be assessed a 20% penalty. Assignments will not be accepted over one week late for any reason. As mentioned in the note regarding labs, the instructor will not answer any question regarding an assignment until it is clear that the student has completed the corresponding labs and spent ample time working through the assignment prior to asking the question.

FINAL PROJECT AND SPECIFICATIONS: Each student will be required to turn in a final project, along with a write-up of the specifications for the project. An initial presentation discussing the project will be given by the student a number of weeks prior to the project due date. The following provides more detail:

Specifications: This will be a technical document detailing the specifications for the project (specific requirements will be provided by the instructor). The specifications will be due at or near the end of the semester, with the specific due date being provided by the instructor. Unlike the other graded activities in this class, the specifications will not be accepted late for any reason.

Final project: The final project will be an original application written by the student (specific requirements will be provided by the instructor). The final project will be due at or near the end of the semester, with the specific due date being provided by the instructor. Unlike the other graded activities in this class, the final project will not be accepted late for any reason.
Grading Scale:

A  90% - 100%
B  80% - 89%
C  70% - 79%
D  60% - 69%
F  Below 60%

Withdrawal Policy:
Students are expected to attend all classes and meaningfully participate each day. Any student who does not make reasonable attempts to successfully complete all course activities (exams, labs, quizzes, etc.), may be withdrawn from the course at midterm. However, if any of the following situations apply, the student will be automatically withdrawn by the end of week 8:

- the student was absent for any 2 consecutive weeks without appropriate notice.
- the student has more than 5 unexcused absences.
- the student has not completed 60% of the class activities (exams, labs, quizzes, etc.).

Other policies:

It is the student's responsibility to be aware of the policies common to all HCC courses. See http://technology.heartland.edu/courses/StudentSyllabusPacket.pdf to view that documentation.

Syllabus disclaimer
This syllabus is permanent until further notice, and may change at any time.